

Weights and Dimensions of *Hyalophora euryalis* Pupae¹ (Lepidoptera: Saturniidae)

The ceanothus silkmoth, *Hyalophora euryalis* (Boisduval) occurs in the United States along the Pacific coast (Collins & Weast, 1961; Ferguson, 1972). Mosher (1916) described the pupae of this species (under the name *Samia californica* Grote), but she gave only sparse dimensional information and did not discuss the genital openings or sex-related size differences. During November 1982, wild cocoons and 5th instars were collected at Presidio of Monterey, between Monterey and Pacific Grove, California. The food plant was Carmel creeper, *Ceanothus griseus* var. *horizontalis*. The ceanothus silkmoth is seldom locally abundant and, among saturniids, is particularly difficult to rear to obtain research specimens (Collins & Weast, 1961; Miller & Cooper, 1980). The availability of these wild specimens from the Presidio of Monterey provided an opportunity to examine the dimensional characteristics of this little studied species. After all individuals had pupated, they were removed from the cocoons and sexed according to the very distinct genital openings on the venter of the 8th and 9th abdominal segments. The genital openings in the ceanothus silkmoth are virtually identical in character to those described and illustrated by Miller et al. (1982) for *Hyalophora cecropia* (Linnaeus). Twelve ceanothus pupae of each sex were weighed and measured as described by Miller et al. (1982). The weights and dimensions are shown in Table 1.

Table 1. Weights and Dimensions of Wild Ceanothus Silkmoth Pupae.

Measurement	Males (n=12)		Females (n=12)	
	Mean	S.D.	Mean	S.D.
Weight	3.8	± 0.6	4.5	± 0.8
Length	32.8	± 2.4	34.2	± 2.2
Width	14.7	± 0.6	15.8	± 0.8
Circumference	44.1	± 1.9	47.4	± 2.7
Antenna Length	17.9	± 1.3	14.8	± 1.1
Antenna Width	8.1	± 0.5	4.7	± 0.5
Antenna Length to Width Ratio	2.2	± 0.2	3.2	± 0.3

weights in grams; dimensions in millimeters

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Thomas A. Miller, US Army Medical Bioengineering R&D Laboratory, Fort Detrick, Maryland 21701

¹The opinions contained herein are those of the author and should not be construed as official or reflecting the views of the Department of the Army.

An Early Season Migration of *Catopsilia pomona* (Lepidoptera: Pieridae) in Java, Indonesia

Catopsilia pomona (F.) is a well-known migrant in parts of Indonesia, and has been recorded many times migrating during the wet season in Java (C. B. Williams, 1930, The migration of butterflies. Edinburgh: Oliver and Boyd). However, as Yukawa (J. Yukawa, 1983, An observation on the migratory flights of *Catopsilia pomona pomona* (Fabricius) in Carita, Java. *Tyo to Ga*, 33:185-186) observed, there are no records of such flights from June to September, and the main migratory season corresponds with the commencement of the north-east monsoon from November onwards. This note is to record a migration of *C. pomona* in south-west Java in mid-September, providing a substantial addition to the known flight period of this species. Any definable insect migration in the Sunda Strait area is of potential importance in assessing likely colonisation patterns of the Krakatau group of islands, and it is of interest that occasional large pale pierids were seen on several of the islands earlier in September, but were not captured. It is possible that they represented the pale *crocale* Cr. form of *C. pomona*.

The present flight was observed on the west coast of the Ujung Kulon Peninsula, between Ciramea and Cikelappabeurem, on the morning of September 20, 1984. Butterflies were moving from North to South, both along the beach and for several hundred m out to sea. They were observed over about two hours during which some 75 individuals were noted flying in the same direction and in an undistracted manner. At Ciramea, a ten minute observation period yielded 43 individuals crossing a defined beach transect, and the dense forest vegetation fringing the beach probably led to 'funneling' of the butterflies into this open area. Heights of flight were 1-3 m, with occasional higher individuals.

On both September 19 and 20, 1984, non-migratory individuals were seen feeding on blossom at Cankeuteuk, on the northern side of the Peninsula, and, although *C. pomona* was not seen on the nearby island Pulau Peucang during the previous week, individuals were observed there frequently from September 20-23, 1984, when observations stopped.

The morning of September 20, 1984, was fine, clear and sunny, but there had